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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/507,096 | 02/17/2000 | Bruce L. Davis | 60100 | 7654 |
| 23735 | 7590 | 06/16/2004 | EXAMINER | |
| DIGIMARC CORPORATION 19801 SW 72ND AVENUE SUITE 250 TUALATIN, OR 97062 | | | MILLER, RYAN J | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2621 | DATE MAILED: 06/16/2004 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | |
|------------------------------|-----------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/507,096 | DAVIS ET AL. |
| | Examiner | Art Unit |
| | Ryan J. Miller | 2621 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 May 2004.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 85-93 is/are pending in the application.

4a) Of the above claim(s) 89 and 90 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 85-88 and 91-93 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 14 May 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 85-88 and 91-93, drawn to encoding auxiliary data in a media signal, classified in class 382, subclass 100.
 - II. Claims 89-90, drawn to encoding data in a color-converted image, classified in class 382, subclass 162.
2. The inventions are distinct, each from the other because:
3. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because claim 85, which is one of the broadest combination claims, does not require the use of a color space converter for converting color images into a color image as required by claim 89, the broadest subcombination claim. The subcombination has separate utility such as encoding information in a color-converted image.
4. Therefore, newly submitted claims 89-90 are directed to an invention that is independent or distinct from the invention originally claimed.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution

on the merits. Accordingly, claims 89-90 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 87 and 88 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 87 calls for the media signal to comprise an audio signal. Such a feature is never described in the applicant's disclosure. In fact, under the field of the invention heading, the applicant describes that the "invention relates to still and moving image capture devices, and more particularly relates to associating auxiliary data with images captured in such devices" (see applicant's specification: page 1, lines 8-9). Appropriate clarification of this issue is required.

Claim 88, calls for the reference to comprise an identifier number. Such an identifier number is never disclosed in the applicant's specification. Is an "identifier number" any possible number? Or, is this "identifier number" a specific number? Clarification of this issue is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 91 and 92 are rejected under 35 U.S.C. 102(e) as being anticipated by

Narayanaswami et al. (U.S. Patent Application Publication No. US 2003/0011684 A1).

As applied to claim 91, Narayanaswami et al. discloses a method of associating auxiliary data with a media signal in a media signal processing system, the system including a media signal recorder (see Fig. 1: Reference numeral 128), a computer (see Fig. 1: Reference numeral 102), and an interface for communicating between the recorder and the computer (see Fig. 1: There is clearly an interface for components 128 and 102 to communicate.), the method comprising automatically steganographically encoding media signal data with digital watermark data upon transfer to the computer (see Fig. 1: Reference numeral 134 is used to apply an invisible digital watermark to the image.); wherein the computer is a separate device from the media signal recorder (see paragraph [0041]: The reference describes that a serial port interface and a parallel port interface for coupling the camera to a computer for downloading information from the camera to the computer (i.e. the computer is external to the media signal recorder).).

As applied to claim 92, Narayanaswami et al. discloses associating metadata in the recorder with a media signal captured in the recorder, transferring said metadata to the computer with the media signal, and associating said metadata in the computer with the digital watermark (see paragraph [0033] and paragraph [0041]: The reference describes an image/parameter processor 106 for recording a plurality of parameters (i.e. metadata) onto an image (i.e. media signal). The reference also describes linking the camera to a computer for downloading

information from the camera's memory 108 to the computer. This information could include the parameters.).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 85-88, and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Narayanaswami et al. (U.S. Patent Application Publication No. US2003/0011684 A1) and Rhoads (WO 97/43736).

As applied to claim 85, Narayanaswami et al. discloses a system for data capture including a media signal capture device (see Fig. 1: Reference numeral 100 referring to a camera), the system including: a recorder for capturing a media signal (see Fig. 1: Reference numeral 128 referring to the camera electronics); a steganographic encoder for encoding auxiliary data in the media signal (see Fig. 1: Reference numeral 134 referring to a watermark processor); memory for storing the media signal with steganographically encoded auxiliary data and additional data captured by the system (see Fig. 1, paragraph [41], and paragraph [49]: The reference describes a memory 108 that stores the watermarked digital images (i.e. the media signal with steganographically encoded auxiliary data) and parameters (i.e. additional data captured by the system).); and transferring the media signal and additional data from the system (see Fig. 1 and paragraph [0038]: The reference describes the use of an IR processor 118 or RF

processor 112 for transmitting (i.e. transferring) parameters and digital images from the camera 100 to external computing devices.).

As applied to claim 86, Narayanaswami et al. discloses that the media signal comprises a video signal, and the steganographic encoder encodes auxiliary data in frames of video (see paragraph [0032]: The reference describes that the camera in Fig. 1 can obtain and watermark video information.).

Claim 85 further calls for the auxiliary data to include a reference used to associate the media signal with the additional data read from the memory. Narayanaswami et al. does not teach this feature; however, Rhoads, in the same field of endeavor of image watermarking, discloses such a feature (see page 80, lines 16-23: The reference describes that by selecting a read watermark option, a user can discover the contents (i.e. additional data) of the watermark (i.e. auxiliary data) by pressing the Web-lookup button (i.e. reference) from an external source (i.e. the memory).).

As applied to claim 87, Rhoads discloses that the media signal comprises an audio signal, and the steganographic encoder encodes auxiliary data in frames of audio (see page 5, line 19: The reference describes that the processing can be performed on an audio signal.).

As applied to claim 88, Rhoads discloses that the reference comprises an identifier number (see page 80, line 19: The Web lookup button (i.e. reference) can be considered an identifier number.).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Narayanaswami et al. by adding the use of a reference to associate the media signal with the additional data as taught in Rhoads because such a system allows for a

watermark containing a small amount of data to be embedded into an image and then linked to a large amount of data. Therefore, the watermark can be easily embedded into the image due to its relatively small size, and contain a large amount of information, since it is linked additional information about the image capture device.

As applied to claim 93, Narayanaswami et al. discloses a media signal capture device (see Fig. 1: Reference numeral 100 referring to a camera) including: a recorder for capturing a media signal (see Fig. 1: Reference numeral 128 referring to the camera electronics); a steganographic encoder for encoding auxiliary data in the media signal (see Fig. 1: Reference numeral 134 referring to a watermarker processor); and usage control information being automatically retrievable by networked devices to determine usage control for use of the media signal (see Fig. 1 and paragraph [0037]: The reference describes a Personal Area Network (PAN) receiver 122 for obtaining recordable parameters (i.e. usage control information) via the PAN which links special electronic devices (i.e. networked devices) having a transceiver and CPU carried on the individuals using human conductivity. This device allows the camera to receive parameters such as the identity of the photographer. Without this information, the camera cannot be used. Therefore, in a sense, this parameter helps to control the usage of the media signal.).

Claim 93 further calls for the auxiliary data to include a reference to a database that stores usage control information for the media signal. Narayanaswami et al. does not teach this feature; however, Rhoads, in the same field of endeavor of image watermarking, discloses such a feature (see page 80, lines 16-23: The reference describes that by selecting a read watermark option, a user can discover the contents of the watermark (i.e. auxiliary data) from an external source such

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as the World Wide Web (i.e. a database). This information can include usage control information.).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Narayanaswami et al. by adding the use of an external data base as taught in Rhoads because such a system allows for a watermark containing a small amount of data to be embedded into an image and then linked to a large amount of data. Therefore, the watermark can be easily embedded into the image due to its relatively small size, and contain a large amount of information, since it is linked to a database of information.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J. Miller whose telephone number is (703) 306-4142. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H. Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan J. Miller

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Examiner
Art Unit 2621

Ryan J. Miller



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